(No Model.) 2 Sheets—Sheet 1.

N. L. RIGBY.

CHURN AND BUTTER WORKER.

No. 274,383. Patented Mar. 20, 1883.

Fig. 1.

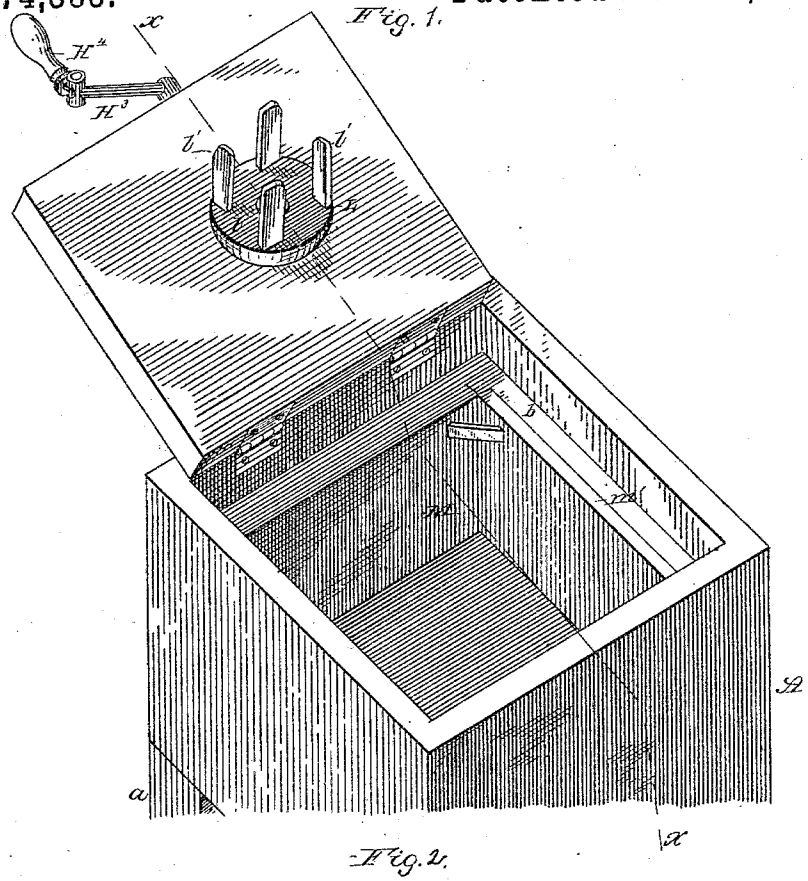
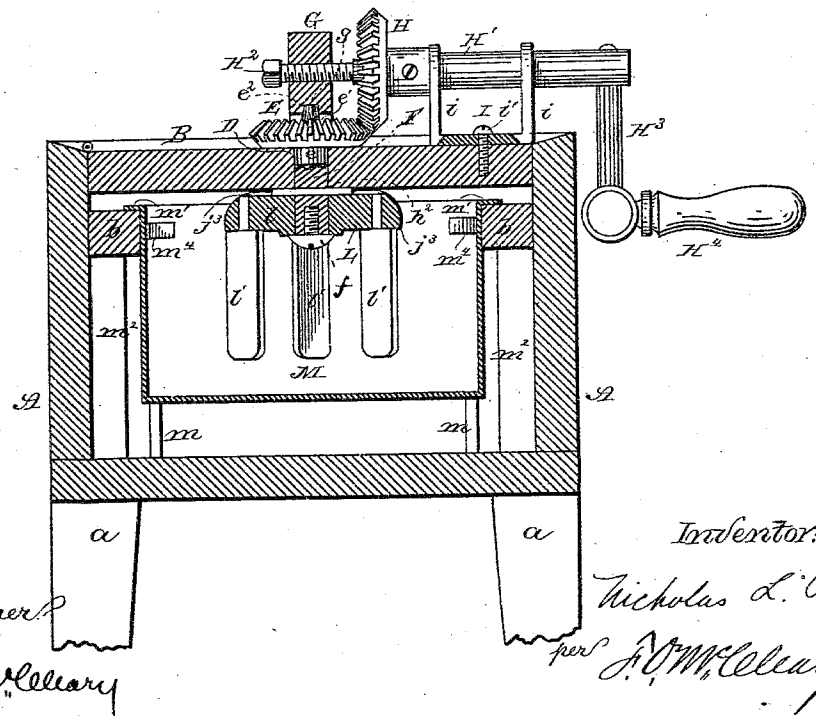


Fig. 2.



Witnesses:
J. B. Garner
E. Scott McCleary

Inventor:
Nicholas L. Rigby
per F. O. McCleary.
Atty.

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3

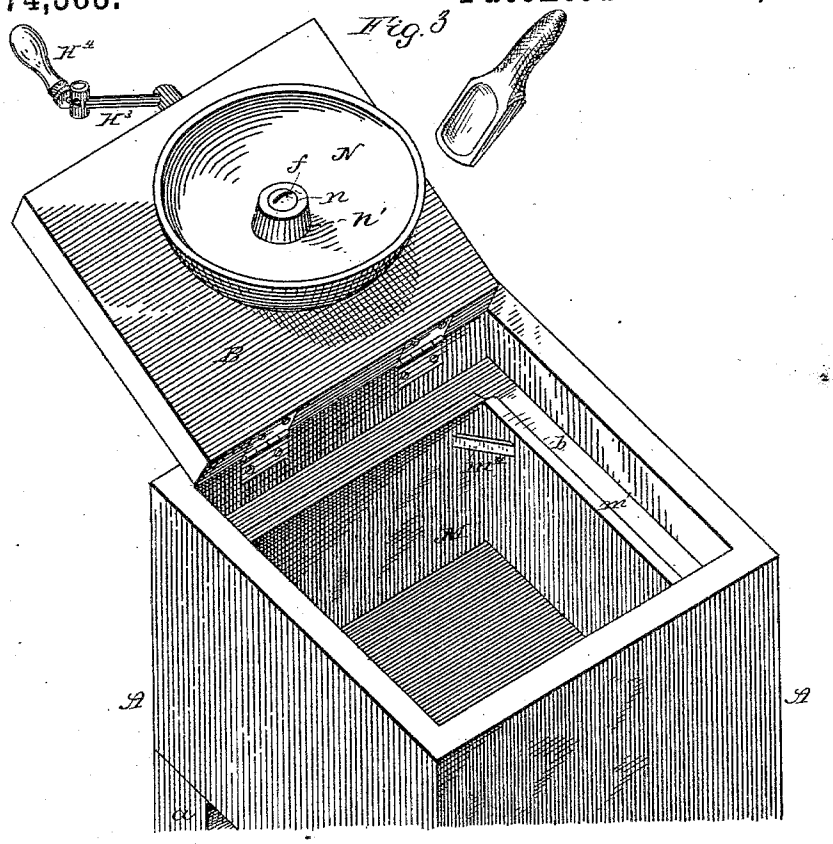


Fig. 4.

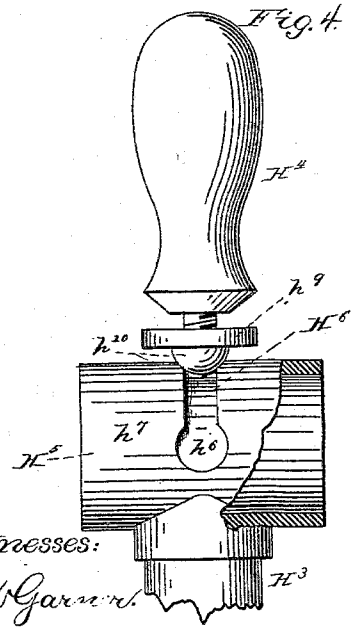
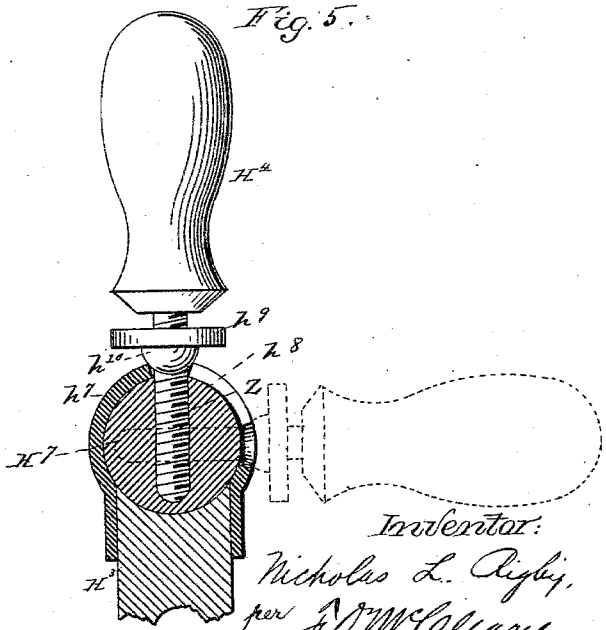


Fig. 5.



Witnesses:
J. W. Garner.
O. Scott McCleary

Inventor:
Nicholas L. Rigby,
per F. O. McCleary,
Atty.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

NICHOLAS L. RIGBY, OF TOPEKA, KANSAS, ASSIGNOR OF ONE-HALF TO JOHN D. PRYOR.

CHURN AND BUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 274,383, dated March 20, 1883.

Application filed October 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS L. RIGBY, of Topeka, in the county of Shawnee and State of Kansas, have invented certain new and useful Improvements in a Combined Churn and Butter-Worker; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to a combined washing-machine, churn, and butter-worker.

The invention consists in the details of construction and combinations of parts hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my improvement arranged for churning, the cover being raised to show the dasher. Fig. 2 is a vertical section on the line *x x* of Fig. 1. Fig. 3 illustrates my improvement when arranged for working butter. Figs. 4 and 5 are detached views of the operating lever or crank.

A represents a box or receptacle supported by legs *a*, and provided with a hinged cover, B, and an outlet or cock, C, for drawing off the water contained in the box. Near the upper edge of the latter, and within the box, is secured a cleat or ledge, *b*, extending around the box and adapted to support the receptacle M.

The cover B is provided centrally with a circular opening, D, adapted to receive and form a bearing for a depending collar, *e*, of a bevel-gear wheel, E. A cylindrical shaft or spindle, F, passes through the central opening, *e'*, of the wheel E and its collar, said shaft being hollow for about the lower half of its length, and interiorly threaded for a purpose hereinafter set forth, while its upper end projects slightly above the wheel E and terminates in a tapering bearing, e^2, adapted to bear in a central recess, *g*, of a cross piece, G, secured to the top of the cover B.

H is a bevel-gear wheel arranged at a right angle to the wheel E and adapted to mesh therewith. Said wheel H is rigidly mounted upon a horizontal shaft, H', supported upon the cover in bearings *i i* of a bracket, I, secured to the cover by a screw, *i'*, or other means. The inner end of the shaft H' has a pivotal bearing against a screw, H^2, set in the cross-piece G, in the same horizontal plane with said shaft, while the outer end of the latter is provided with an arm, H^3, arranged at a right angle to the shaft, and provided with a pivoted handle, H^4, adapted to be turned either at a right angle to the arm H^3 to form a crank, or retained in line with said arm to constitute an operating-lever, as will be further described.

It will be apparent from the description thus far that by revolving or oscillating the shaft H' by means of the crank or lever H^3 H^4 the shaft or spindle F is operated through the medium of the bevel-gearing.

When it is desired to use the machine for washing, a rubber is secured to the lower or hollow end of the spindle F by means of a screw, *f*, passing through said disk and engaging the threads of the spindle, the head of the screw serving to retain the disk in place. The rubber may then be oscillated by means of the lever H^3 H^4 and the clothes thoroughly washed by the pins. A transverse pin, h^2, is passed through the spindle F, just below the collar *e*, so as to project on each side of the spindle, and the upper side of the disk *j* of the rubber is provided with slots or recesses j^3 j^3 to receive said pin, which prevents the disk from turning independently of the spindle and assists in holding it in place.

When it is desired to convert the machine into a churn the rubber J is removed by removing the screw *f*, and a dasher, L, is secured to the spindle F. Said dasher consists of a disk, *l*, slotted, and provided with a central opening to admit of its attachment to the spindle by means of the screw *f*, and depending dash-blades *l'*, arranged each at a right angle to the next adjacent blade. A cream-receptacle, M, of tin or other suitable material, is then placed within the box A. Said receptacle M is provided with feet *m*, adapted to hold the receptacle above the bottom of the box A, and at its upper edge with an outwardly-turned flange, *m'*, adapted to rest on the ledge *b* within the box A. Thus it will be seen that a space, m^2, is left between the four sides and bottom of the cream-receptacle M and the box A. Said space is designed to con-

tain water to preserve the desired temperature of the cream, and by means of the outlet C the water may be discharged when desired. m^4 m^4 represent corner-braces arranged within the receptacle M, and to one of said braces a thermometer may be secured, if desired.

The dasher L is adapted to be revolved or oscillated by the arm H^3 and handle H^4, as desired, said handle being turned at an angle to the arm to form a crank when it is desired to revolve the dasher, and in line with the arm to form simply a lever when an oscillating motion is required.

After the churning process has been completed the dasher is removed by removing the screw *f*, the cover B is turned back, as shown in Fig. 3, and a butter-bowl, N, provided with a central opening, *n*, and a collar, *n'*, is secured to the spindle F by the screw *f*. The butter is placed in said bowl, and the latter is revolved or oscillated, by means of the crank H^3 H^4, with one hand of the operator, and the butter is worked with a ladle, in the usual way, by the other hand.

The cover may be tilted or inclined, when desired, to pour back into the churn any milk which may be in the bowl.

Figs. 4 and 5 illustrate the construction of my improved handle.

H^5 represents a hollow T-iron, adapted to be secured to the end of the arm H^3. Said iron is provided with a slot, H^6, enlarged and countersunk at each end h^6 h^6.

H^7 is a cylindrical plug, adapted to enter the cylinder h^7 of the T, and adapted to turn therein. Said plug is formed with a threaded recess, h^8, to receive the threaded shank *z* of the handle H^4, which latter carries a thumb-nut, h^9, provided on its under side with an enlargement, h^{10}, adapted to enter the countersinks of the slot H^6. By this construction the handle H^4 may be turned to either of the positions shown in Fig. 5, and securely held therein by means of the thumb-nut, to form either a crank or a simple lever.

By the construction and arrangement of parts above described it will be seen that I obtain a machine adapted for use either as a washer, a churn, or a butter-worker, which may be manufactured at a moderate cost, and is of simple and durable form, thus avoiding all liability to breakage, disarrangement, or injury.

I do not claim in this application the improved construction of operating-handle, whereby the latter may be either a crank or a straight lever; but I reserve to myself the right to file a separate application for Letters Petent therefor.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a combined washer, churn, and butter-worker, the combination, with a box provided with a hinged cover, of a bevel-gear wheel provided with a depending collar, a spindle passing through said wheel and collar, a horizontal shaft provided with a bevel-gear wheel adapted to mesh with the first-mentioned wheel to operate the spindle, and a butter-bowl adapted to be secured to the spindle after the removal of the washing or churning implements, and revolved upon the cover, which latter may be tilted, as and for the purpose described.

2. The combination, with the hinged cover of a churn, of a spindle and means for operating the same, a butter-bowl, and means for securing it to the spindle, whereby the bowl may be revolved and the cover tilted to discharge the milk from the bowl to the churn, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

NICHOLAS L. RIGBY.

Witnesses:
JNO. D. PRYOR,
L. D. ZENOR.